Project Status Report for: November 2001

Project Title: Ultra Low NOx Integrated System for Coal-Fired Power Plants

Project Number: 91890460 **Project Manager:** John Marion

Customer Name: U.S. DOE / Performance Projects **Project Leader:** Charles Maney

GOALS AND OBJECTIVES:

Develop low cost, retrofit NO_x control technologies to address current and anticipated, near term emissions control legislation for existing coal fired utility boilers. Specific goals include:

- Achieve < 0.15 lb/MMBtu NO_x for eastern bituminous coals
- Achieve < 0.10 lb/MMBtu NO_x for western sub-bituminous or lignitic coals
- Achieve economics at least 25% less than SCR-only technology
- Validate NOx control technology through large (15 MWt) pilot scale demonstration
- Evaluate the engineering feasibility and economics for representative plant cases
- Provide input to develop commercial guidelines for specified equipment
- Provide input to develop a commercialization plan for the resultant technologies

WORK PLANNED FROM PREVIOUS REPORT:

Task 1.0 – Test Fuels Characterization

- Complete drop tube furnace testing and draft task report.

Task 2.3 – Global Mixing Process Improvement

- Begin running CFD cases of actual BSF test conditions.

Task 5 – Engineering Systems Analysis & Economics

- Complete preliminary cases for final economic analysis.

Task 7 – Data Compilation and Final Report

- Continue work on final report.

ACCOMPLISHMENTS FOR REPORTING PERIOD:

Task 1.0 – Test Fuels Characterization

- *Complete drop tube furnace testing and draft task report.*

All drop tube furnace testing has been completed and the chemistry laboratory is analyzing the samples. Task report is in progress.

Task 2.3 – Global Mixing Process Improvement

- *Begin running CFD cases of actual BSF test conditions.*

Grid generation is in progress and the case will be running in December. This task has been delayed due to a manpower shortage.

Task 5 – Engineering Systems Analysis & Economics

- *Complete preliminary cases for final economic analysis.*

The preliminary cases for the final economic analysis have been completed. A review of the cases raised some additional questions that are being investigated.

Task 7 – Data Compilation and Final Report

- *Continue work on final report.*

Work continues on the final report. Drafts of the introduction and background sections are largely completed and the available task reports have been integrated into the final report.

WORK PLANNED FOR NEXT REPORTING PERIOD:

Task 2.3 – Global Mixing Process Improvement

- Begin running CFD cases of actual BSF test conditions.

Task 5 – Engineering Systems Analysis & Economics

- Complete cases for final economic analysis.

Task 7 – Data Compilation and Final Report

- Continue work on final report.